

AMENDMENTS TO THE CLAIMS

Amendments to the Claims

This listing of claims will replace all prior listings in this application.

Listing of Claims:

1. (Currently amended) A method of producing a complex structure, the structure being adapted to be dissociated in a separation region, the method comprising assembling two substrates at respective connecting faces thereof, wherein prior to assembly, a tangential stress state difference is created between the connecting faces by applying mechanical forces to curve each of the two substrates, wherein the tangential stress state difference is ~~selected~~ configured to produce a predetermined stress state within the complex structure ~~at the moment of~~ during dissociation of the complex structure.

2. (Previously presented) The method according to claim 1, wherein the tangential stress state difference between the connecting faces is selected to minimize the stresses in the separation region at the moment of dissociation.

3. (Previously presented) The method according to claim 1 further comprising curving the two substrates so that the connecting faces comprise respectively concave and convex faces.

4. (Previously presented) The method according to claim 3, wherein curving the two substrates comprises curving so that the connecting faces comprise complementary faces.

5. (Previously presented) The method according to claim 4, wherein curving the two substrates comprises curving so that the connecting faces comprise respectively spherical concave and spherical convex faces.

6. (Previously presented) The method according to claim 1, wherein

applying mechanical forces comprises creating a pressure difference between the connecting faces.

7. (Previously presented) The method according to claim 6, wherein creating a pressure difference between the connecting faces comprises aspirating one of the two substrates onto a concave preform having a suitable profile and imparting the profile to a face of the one substrate, and wherein the one substrate rests on the concave preform at its periphery.

8. (Previously presented) The method according to claim 6, wherein creating the pressure difference between the connecting faces comprises aspirating one of the two substrates into a cavity, the one substrate resting locally at its periphery on a seal bordering the cavity.

9. (Previously presented) The method according to claim 1, wherein applying mechanical forces comprises deforming one of the two substrates between complementary first and second preforms, one of which is concave and the other of which is convex, and imparting selected profiles to the connecting face.

10. (Previously presented) The method according to claim 9, wherein the first complementary preform comprises the other of the two, wherein the substrate is curved to have a selected profile.

11. (Previously presented) The method according to claim 9, wherein the second preform includes aspiration channels for keeping the one substrate curved when the first preform has been removed.

12. (Previously presented) The method according to claim 1, wherein applying mechanical forces comprises applying mechanical forces simultaneously to the two substrates by deforming the two substrates between two preforms having selected profiles to be imparted to the connecting faces.

13. (Previously presented) The method according to claim 1, wherein

applying mechanical forces comprises applying mechanical forces to at least one of the substrates by means of a preform comprising a mold.

14. (Previously presented) The method according to claim 13, wherein the preform comprises a porous mold.

15. (Previously presented) The method according to claim 1, wherein applying mechanical forces comprises applying mechanical forces to the two substrates using at least one deformable preform.

16. (Previously presented) The method according to claim 1, wherein assembling the two substrates comprises molecular bonding.

17. (Previously presented) The method according to claim 1 further comprising treating the connecting faces to facilitate bonding.

18. (Previously presented) The method according to claim 1, wherein the two substrates are assembled by direct contact, wherein the face of at least one of the two substrates is adapted to prevent air from being trapped between the connecting faces.

19. (Previously presented) The method according to claim 18 further comprising piercing at least one of the two substrates.

20. (Previously presented) The method according to claim 19, wherein piercing at least one of the two substrates comprises piercing the substrate at its center.

21. (Previously presented) The method according to claim 18 further comprising forming in at least one of the two substrates at least one dead-end channel discharging at the edge of the substrate.

22. (Previously presented) The method according to claim 1, wherein the two substrates are assembled by means of a flow layer.

23. (Previously presented) The method according to claim 1, wherein the two substrates are assembled at a temperature higher than room temperature.

24. (Previously presented) The method according to claim 23 further comprising heating the two substrates by contact with heated preforms.

25. (Previously presented) A method according to claim 24, wherein the preforms are heated to respective different temperatures.

26. (Withdrawn) A method for transferring a thin layer from a source substrate to a target substrate comprising the following steps:

ionically implanting the source substrate through a face thereof to create a buried weakened layer at a particular depth relative to the face of the source substrate, a thin layer thereby being delimited between the face and the buried weakened layer;

curving each of the source substrate and the target substrate by applying mechanical forces to create a tangential stress state difference between the face of the source substrate and a face of the target substrate;

assembling the face of the source substrate to the face of the target substrate to form an assembled structure; and

dissociating the thin layer from a remainder of the source substrate, wherein the tangential stress state difference is selected to produce a predetermined stress state within the assembled structure at the moment of dissociation.

27. (Withdrawn) The method according to claim 26, wherein creating a tangential stress state difference between the faces comprises creating a tangential stress state difference to minimize internal stresses at the moment of dissociation.

28. (New) A method of producing a complex structure, the structure configured to be dissociated in a separation region, the method comprising:

providing first and second substrates, wherein one of the first or second substrates includes a separation region therein;

applying mechanical forces to curve each of the first and second substrates and to create a tangential stress state difference between bonding surfaces of the first and second substrates; and

bonding the first and second substrates together at the bonding surfaces, wherein the tangential stress state difference is configured to produce a predetermined stress state within the separation region during dissociation of the complex structure at the separation region.